

# THE POTENTIAL BENEFITS OF TRANS- EUROPEAN COLLABORATION BETWEEN EXPERIENCED NATIONAL SCIENCE ADVISORS IN SPECIFIC KNOWLEDGE AREAS. *EXAMPLE: FOOD, AGRICULTURE AND CLIMATE*

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ESAF General Assembly 2021

**From local advice to global benefit**

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# SCIENCE BASED POLICY ADVICE AT DCA EMBEDDED IN FRAMEWORK CONTRACT



Ministry of Food, Agriculture  
and Fisheries of Denmark

## Main thematic areas in three agreements:

- Plant production
- Animal production
- Food quality and consumer preferences

Contract: App. 30 mill. Euro for Research AND Policy advice

## Strong link with strategic and applied research in science departments:

**Agroecology, Animal science, Food science, Engineering, Genomics,**

Leveraging contract funding w competitive funding from  
national/international sources > 100%

Cooperation with agri-food industry in 70 percent of all activities.



# DCA APPROACH: INTEGRATION OF ACTIVITIES

Science based Policy Advice to Ministry of Food, Agriculture and Fisheries

Current challenges in food and agriculture:

Environment (nitrate leaching, pesticides), climate, productivity, antibiotics animal welfare etc.

App. 200 policy advice deliverables annually

**Relevance, excellence**

**Synergy**

>500 peer reviewed journal papers annually

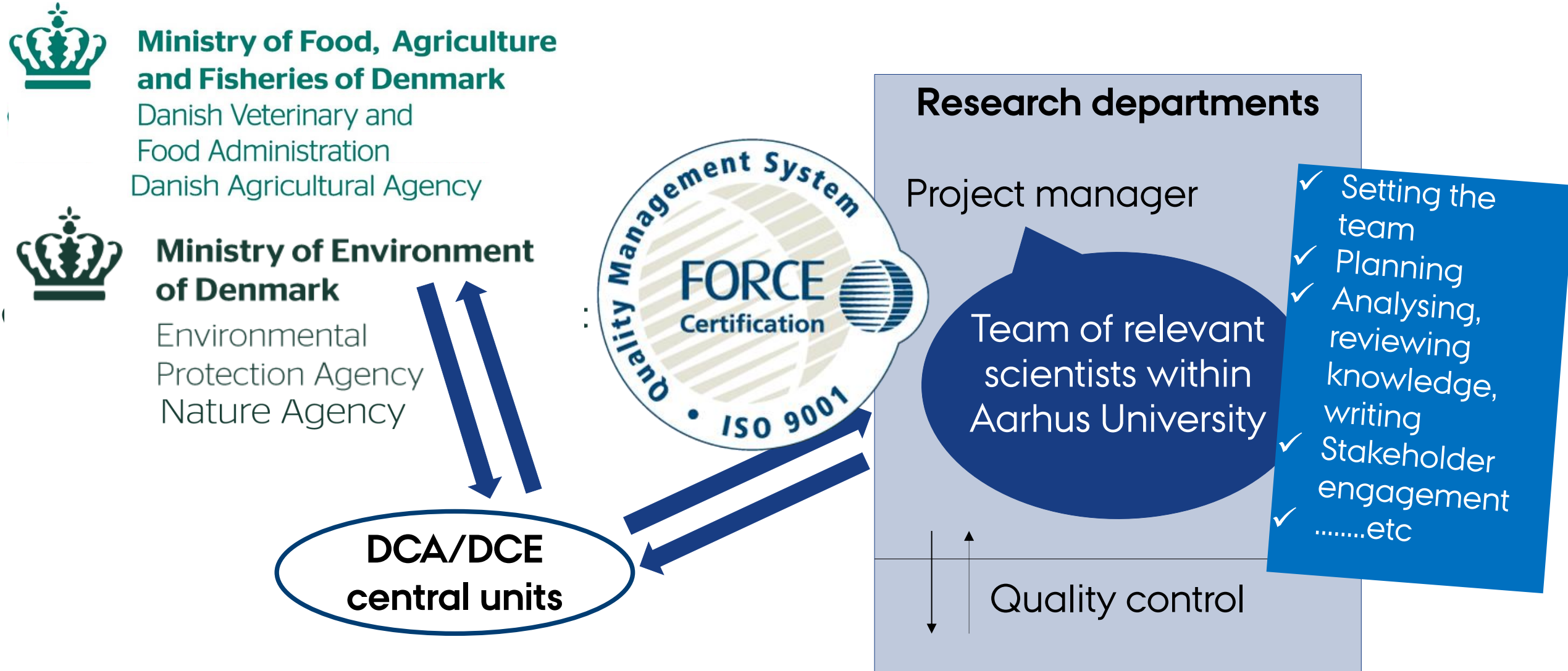
Global agenda & international collaboration

- › Focus: sustainability/Green growth, food security, climate change, agroecology, organic food
- › Sustainable food processing and packaging
- › Food systems, consumer integration

Research collaboration with industry  
= farmers and companies!

- › Focus on R&I solutions to challenges:
- › Smart farming, green growth, productivity
- › IT and AI, biorefinery, innovative proteins
- › business creation, entrepreneurship

# FLOW OF TASKS – AU'S RESEARCH-BASED POLICY ADVICE



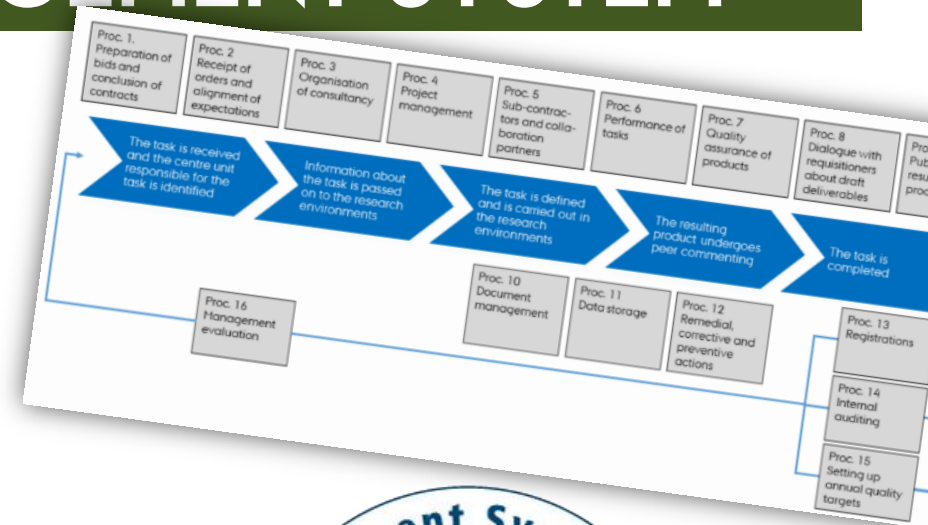
# ENSURING QUALITY, INTEGRITY AND TRANSPARENCY IN SCIENCE-BASED POLICY ADVICE

## ISO9001 CERTIFIED QUALITY MANAGEMENT SYSTEM

**Quality** – peer review of science  $\neq$  peer review of advice

**Integrity** – independence, impartiality, arm length principle

**Transparency** – clarity, roles, responsibilities, publication, openness





## *Science advice is a difficult trade:*

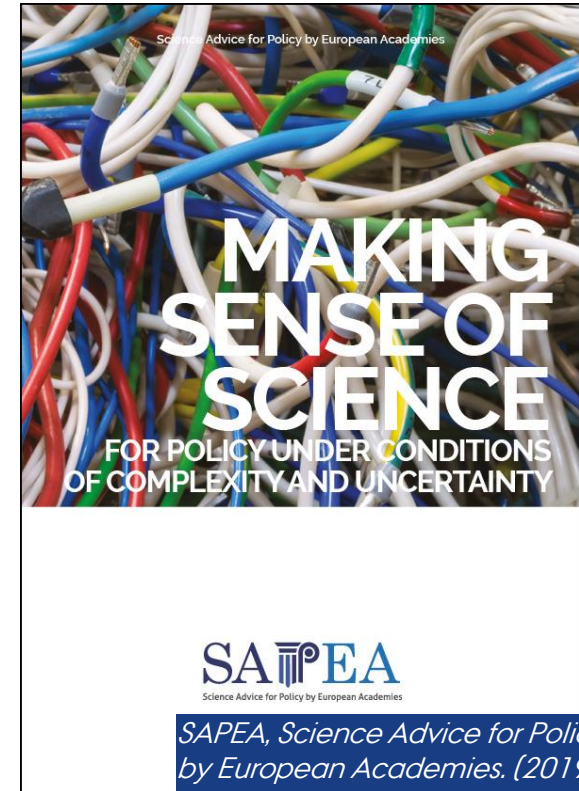
- Politically motivated requests for Science Based Advice – not surprising, but has implications...
- Requests for more precise and goal oriented advice than current evidence supports...
- Pressure on scientists to produce “quick answers” to complex questions
- Arena for political battles between agricultural organisations and NGOs - resulting in different interpretations of the science behind specific advice
- Stakeholder organisations trying to discredit scientists and scientific results
- Individual AU scientists expressing different opinions from the official Advice from AU (DCA/DCE)



# MAKING SENSE OF SCIENCE FOR POLICY UNDER CONDITIONS OF COMPLEXITY AND UNCERTAINTY

## Conclusions of the report (my selection):

- ❖ The purpose and significance of scientific advice depend on the issue and the context.
- ❖ Scientists, as well as policymakers, should be sensitive to various biases and interests
- ❖ Science advice is always affected by values, conventions and preferences.
- ❖ The effectiveness of scientific advice depends on the right composition of advisers and the quality of the dialogue between advisers and policymakers.
- ❖ The relationship between science advisers and policymakers relies on mutual trust.
- ❖ Stakeholders and citizens should be integrated into the process.



*SAPEA, Science Advice for Policy by European Academies. (2019). Making sense of science for policy under conditions of complexity and uncertainty. Berlin: SAPEA. <https://doi.org/10.26356/MASOS>*

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? ! Challenges  
❖ Integrity  
❖ Independance,  
❖ arms-length,  
❖ Disagreement  
between scientists  
(ambiguity),  
❖ Uncertainties  
❖ Transparency  
❖ ...  
*=> need for  
exchange of  
best practices*



## *Science advice is a difficult trade:*

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- ❖ The organization, funding and responsibility for providing science-based policy advice differs between countries and across subject areas/sectors.
- ❖ **Regardless of the type of organisation, science policy advice should be based on a number of principles to ensure quality and trustworthiness.**
- ❖ There is a need for a European forum for sharing experiences between the providers of science-based policy advice in the nexus of agriculture, food, climate and environment.

**Therefore: Focus of webinar is on the meta-perspective  
of science advice,  
- not on technical/scientific content of specific advice**

Find more:  
Programme and contributions ([au.dk](https://conferences.au.dk/science-based-policy-advice-in-agriculture/))  
[conferences.au.dk/science-based-policy-  
advice-in-agriculture/](https://conferences.au.dk/science-based-policy-advice-in-agriculture/)

# SCIENCE-BASED POLICY ADVICE IN AGRICULTURE, FOOD, CLIMATE AND ENVIRONMENT

16-17 MARCH 2021

ORGANIZED BY AARHUS UNIVERSITY (DCA & DCE)  
AND THE EUROPEAN SCIENCE ADVISORS FORUM (ESAF)



# IDEAS FOR CONTINUED TRANS-EUROPEAN COLLABORATION IN SCIENCE POLICY ADVICE (*META-LEVEL*)

- ❖ Best practices, shared principles vis-a-vis identification of important challenges
  - ❖ procedures and quality assurance schemes applied under different governance structures and types of science advice
  - ❖ Stakeholder engagement, uncertainties, complexities, ambiguity
  - ❖ consistency over time vs improved knowledge, recruitment,
- ❖ Developing training courses
- ❖ Peer review of "science advice processes" and quality assurance schemes
- ❖ Continue building overview of peer institutions involved in science advice and practices for dealing w challenges



# IDEAS FOR CONTINUED TRANS-EUROPEAN COLLABORATION IN SCIENCE TO POLICY ADVICE

*(TOPIC SPECIFIC ISSUES WITHIN AGRICULTURE, FOOD, CLIMATE AND ENVIRONMENT)*

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- ❖ Topic specific working groups and collaboration on science advice
  - ❖ Ad hoc exchange of methods and collaboration within specific parallel science-advice processes (examples do exist already)
  - ❖ Second opinion and peer review of specific science advice tasks
  - ❖ Reference point for scientific projects and partnerships with ambitions for providing science advice *(EJP Soil, Horizon Europe partnerships, JPI's..)*



# Trans European collaboration in Science Advice on specific knowledge areas: Potential gains and possible pitfalls?

## Science advice in MS (regional or national level):

Context dependant, continuous interaction, consistency over time, rapid responses when needed, long term planning, connection between knowledge needs and funding of research activities, procedures for stakeholder engagement.

?Independence, integrity and arms-length challenged! Transparency, second opinions, ...

*Efficiency, second opinions, increased capacity and joint competences*



*Timing, national priorities, transparency, resource use, language, stakeholders, ..*

## Institutional collaboration across borders on specific advice/knowledge areas

e.g. national implementation of CAP/EC directives, Green Deal,  
Heavy knowledge needs: Agriculture and climate

*Ensuring involvement of context based knowledge  
Consistency, policy coherence,*



*Organisation, funding, independancy  
Capacity/interest in trans-European perspectives*

## Contribution to EC knowledge needs and EU policy making:

Bringing in networks of national science advisors experienced in questions at hand

*- and, it does exist in some knowledge areas...*

# TRANS-EUROPEAN LONG-TERM COLLABORATION ON SCIENCE ADVICE, AN EXAMPLE...

- Supporting the enforcement of pig welfare legislation is one of the Commission's priorities.
- EURCAW-Pigs provides scientific and technical knowledge to Competent Authorities of EU member states, to animal welfare policy workers and to their support bodies
- science, training and communication.
- *For **verification of compliance** with the European pig welfare legislation*



EU Reference Centre  
for Animal Welfare Pigs

*"For technical and scientific advice on pig welfare, please send us an email with your question. This Q2E service is open to Competent Authorities and government policy workers of EU Member States."*



November 2016. International workshop on:  
**Estimation of nitrogen loads to the marine environment around the time of the year 1900**

**NEED FOR IMPROVED INTERNATIONAL  
COLLABORATION IN POLICY ADVICE  
- EXAMPLES OF FIRST ATTEMPTS**



April 2017. International workshop/expert meeting on:  
**Constructed filters in the landscape for reducing nitrogen and phosphorus losses to the aquatic environment**





# INNOVATION IS HIGHLY NEEDED!

